

ABSTRACT

The invention relates to a method of using radio frequency waves to artificially create catalytic action in a catalyst-free chemical reaction within a substance. To mimic or imitate the catalyst, radio frequency waves are transmitted through the substance at a signal strength sufficient to electronically reproduce the effect of the physical presence of a selected catalyst. The radio frequency waves have a selected transmission frequency substantially equal to a catalyst signal frequency of the selected catalyst, defined as the signal frequency determined by nuclear magnetic resonance of the selected catalyst. It is commonplace to use nuclear magnetic resonance to identify elements within a substance and the signal frequencies of various elements (including catalysts) are listed in widely published tables. To date, the mechanism by which catalysts bring about chemical reactions has been unknown. The inventor has recognised that the physical presence of a catalyst brings about a chemical reaction due to the emission of low intensity radio frequency waves from the catalyst with the signal frequency that is emitted being the signal frequency of the catalyst that is commonly determined by nuclear magnetic resonance. Therefore, the invention can be used to eliminate the need for expensive metallic catalysts, such as platinum. The invention electronically reproduces the effect of the physical presence of a catalyst by transmission of a radio frequency wave with a signal frequency equal to that signal frequency emitted by the catalyst and as determined by nuclear magnetic resonance of the catalyst.